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The Next Kitty Hawk ACTD Program Sped Spartan Scout Tests

By Rear Adm. JAMES STAVRIDIS

Only five men saw the Wright brothers fly at Kitty Hawk. On Dec. 17, 2003, the world celebrates this flight's centennial anniversary.

Another Kitty Hawk occurred recently. It, too, got little attention, but also portends transformation, one limited only by imagination. In Mayport, Fla., last May, an unmanned surface vehicle was tested. It now operates with the U.S. Navy strike group built around the aircraft carrier Enterprise, less than three years after development began.

"It is clear the military does not have enough unmanned vehicles," stated President George W. Bush, referring to U.S. operations in Afghanistan. That was recognized after the attack on the USS Cole, but only Navy research and development envisioned ships employing unmanned surface vehicles to detect threats and keep them at bay.

In January 2001, development was initiated on such a vehicle, relying on technologies in the fleet. The result was Spartan Scout, a remote-controlled, 7-meter boat that could snap on tools for several uses.

Spartan Scout meets a need for ship force protection. Using a forward-looking infrared/CCD camera, Spartan Scout can provide surveillance in a harbor, not only for Navy ships but also U.S. Coast Guard units responsible for port security. It also can provide reconnaissance for ships passing through narrow maritime chokepoints.

Originally, the military saw only a scout role for the airplane, but it came to have multiple uses. That will be the case with unmanned surface vehicles, too.

Spartan Scout, for example, could be modified for mine detection or anti-submarine warfare. When equipped with a Hellfire or Javelin missile, it could attack other surface vessels or conduct precision strikes ashore. And, unlike any other unmanned system, unmanned surface vehicles can relay communications to aircraft, ships and submarines.

The unmanned surface vehicle is a harbinger of transformation. As it becomes integrated with naval operations, it will serve as a force multiplier. By 2030 to 2050, a 20-ship strike group may have some 200 unmanned surface vehicles, predicts the Chief of Naval Operations Strategic Studies Group, according to a July article in *Wavelengths*, a publication by the Carderock Division of Naval Sea Systems Command.

Moreover, such vessels will enable naval superiority in the face of emerging threats, most notably the dangerous threats of the littorals, or coastal regions.

The defense labs have led the way and been the origin of transformations. In World War II, Navy labs helped develop systems that transformed anti-submarine warfare and rolled back the German submarine threat. Sixty years later, the Naval Undersea Warfare Center, a descendent of one of those labs, created Spartan and the transformation it represents.

To a great degree, the value of defense labs lies in their scientists. They not only focus on war-fighting needs, but push to meet them. Spartan Scout is an example. Operators like our team in the Enterprise Carrier Strike Group who saw Spartan wanted it immediately. This meant faster development and getting temporary alterations to take Spartan aboard ship — no easy feat.

Naysayers said this was too much, too fast. Such opposition often withered with one question from Spartan's lead scientist, Vic Ricci: "What are we here for?"

Rapidly getting technology out of the lab has been a major defense challenge. It takes money that often is not in a budget that was developed some 14 to 30 months prior and possibly before the technology's potential was recognized. Often, many technologies end up in "death valley" — the period between a lab's development and funding that never comes.

Enter one of the best enablers of defense transformation today, the Advanced Concept Technology Demonstration (ACTD) program. This initiative speeds technologies to war-fighters by funding their demonstration and assessment, and, if successful, eases them into acquisition.

The ACTD program helped get Spartan Scout out of the lab and to our carrier strike group. It funded continued development, until more Navy funding followed, thus providing scheduling flexibility and enabling Spartan Scout to meet deployment timelines. It also provided visibility, resulting in Army and international support for developing its many uses.

Additionally, it got the organization behind Spartan Scout. While the Naval Undersea Warfare Center technically manages it, the U.S. Third Fleet develops its concept of operations, and the U.S. Pacific Command oversees this effort.

Reflecting on the flight centennial, computer magnate Bill Gates wrote, "The Wright brothers gave us a tool, but it was up to individuals and nations to put it to use." That took decades.

Today, new tools are emerging across the technology spectrum, and Spartan Scout is one. The ACTD program can put these tools to use faster and enable transformation sooner. It's doing that for the Navy in this forward-deployed carrier strike group with great enthusiasm and energy.

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